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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,917	01/28/2000	Chris Warren Patten	50N3426(3020/5)	2820

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EXAMINER
YENKE, BRIAN P

ART UNIT	PAPER NUMBER
2614	9

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/493,917	PATTEN ET AL.
	Examiner	Art Unit
	BRIAN P. YENKE	2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE filed 17 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8-14,17,18,20 and 21* is/are rejected.

7)☒ Claim(s) *20-21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Continuation of Disposition of Claims: Claims pending in the application are 1-5, 8-14, 17-18 and 20-21 (claims 6-7, 15-16 and 19 being cancelled).

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 January 2003 has been entered.

2. Applicant's arguments filed 21 January 2003 have been fully considered but they are not persuasive.

Claim Objections

3. Claims 20 and 21 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 20 and 21 were dependent upon independent claim 19 which has been cancelled. Thus claims 20 and 21 should be cancelled or amended to depend upon a pending claim. Since claims 20-21 claim the same subject matter as claims 2, 11 (claim 20) and claims 3,12 (claim 21), the examiner has rejected the claims as done in the previous office action as shown below.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 8-14, 17-18 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Marflak et al., US 6,323,915 and Teraoka et al., US 5,537,149 and applicants admitted prior art**.

In considering claims 1-2, 10-11 and 20,

1) the claimed receiving an image having a first aspect ratio... is met by video receiver 312 (Fig 3) which receives either a 16:9 or 4:3 video signal

2) the claimed displaying said image on a display having a second aspect ratio is met by display screen 322 (Fig 3) which is displays a video signal in the 4:3 format

3) the claimed moving said image is met where Marflak discloses moving the image to the screen based on the signal aspect ratio and the displays aspect ratio (col 10, line 61-67 to col 11, line 1-11), by modifying the number of electrons in the unused portion of the display.

However, Marflak remains silent on the display having sensors which detect the image and moving the image as a single entire image. Marflak discloses a system which utilizes an edge/border modification signal in order to control the display system to display the received video signal into a modified aspect ratio.

The use of sensors on a display to control the displayed picture is well-known in the art. As disclosed by applicant's Fig 1, 2 which includes sensors 108/208, 110/210, 112/212 and 114/214 to ascertain the position of the displayed image and assist in the adjustment of the displayed picture.

Teraoka et al., US 5,537,149, discloses a Display Device which receives either a 4:3 or 16:9 video signals and displays the received signal on a 16:9 and 4:3 display device respectively. Teraoka discloses a system which expands or compresses the respective video signal, where the video signal is size adjusted to maintain the distance from the original vertical and horizontal center.

Sensors are conventional in the art, where sensors are used to center a received signal onto a display. In the event a signal is displayed which has the desired aspect ration, where the image is shifted down (or up, left or right), in order to center the signal

the signal must be moved (as a single entire image) up (or down, right or left respectively) in order to provide a centered display which maintains the image aspect ratio.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Marflak which discloses a system which receives either a 16:9 or 4:3 video signal on a 4:3 display, with conventional sensors as admitted by applicant's Fig 1, 2, and moving an image of the desired aspect ratio to the sensors, in order to properly align/display the received signal while maintaining the center position of the original image as disclosed by Teraoka.

In considering claims 3, 12 and 21,

Marflak remains silent on a display which has a 16:9 aspect ratio. Marflak discloses display system which display either a 4:3 or 16:9 receive video signal on a 4:3 display device.

The displaying of a 4:3 aspect ratio on a 16:9 display is well-known in the art. As disclosed by Teraoka, which discloses the displaying of a received 4:3 and 16:9 video signal, onto a 16:9 and 4:3 display, respectively.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify Marflak which discloses receiving both a 4:3 and 16:9 aspect ratio video signal and displays the signal on a 4:3 display, with Teraoka et al, in order to properly display a received signal where a users display device is a 16:9 aspect ratio display.

In considering claims 4-5, 8-9, 13-14 and 18,

As stated above in claim 1, Marflak remains silent on the use of conventional sensors as disclosed in applicant's Fig 1 and 2, and also in the step size being in centimeters. Marflak discloses a system which utilizes an edge/border modification signal in order to control the display system to display the received video signal into a modified aspect ratio.

The use of sensors on a display to control the displayed picture is well-known in the art. As disclosed by applicant's Fig 1, 2 which includes sensors 108/208, 110/210, 112/212 and 114/214 to ascertain the position of the displayed image and assist in the adjustment of the displayed picture.

Teraoka et al., US 5,537,149, discloses a Display Device which receives either a 4:3 or 16:9 video signals and displays the received signal on a 16:9 and 4:3 display device respectively. Teraoka discloses a system which expands or compresses the respective video signal, where the video signal is size adjusted to maintain the distance from the original vertical and horizontal center. Although, Teraoka remains silent on the size of the adjustments, it is known that pixels range in size in terms of millimeters and thus a centimeter step (increment) would provide an adjustment in terms of multiple pixels.

Therefore, it would have been obvious to one or ordinary skill in the art, to modify Marflak, which discloses the conversion of a received first aspect ratio video signal, into a 2nd displayed aspect ratio, with applicant's admitted prior art and Teraoka, in order to

determine the position of the adjusted 2nd aspect ratio video signal, by using conventional display sensors in order to maintain the center position, both horizontally and vertically, of the original 1st aspect ratio receive signal, by moving the image (converted or not) to ensure the image is centered on the display.

Applicant's Arguments

a) Regarding claims 1, 10 and 19, applicant states that neither of the cited references, teach or suggest a method for performing auto convergence in which *a received image is moved so that each sensor can detect the corresponding side of the image.*

b) Regarding claims 1, 10 and 19, applicant states that Marflak would have no reason to turn to the teaching of Fig 1 and 2 to implement sensors and then to move a received image so that the sensors could detect the sides of the image.

Examiner's Response

a) The examiner disagrees. It is noted by the examiner, the applicant discloses "The movement of the image can be in the form of shifting the entire image towards the sensor, or alternatively, stretching the image so that the edges of the image can be detected by the sensors." Marflak discloses a system which utilizes an edge/border modification signal in order to control the display system to display the received video signal into a modified aspect ratio. Marflak also discloses in the background that a 16:9 aspect ratio picture was vertically stretched to cover the black bands at the top and

bottom of the 4:3 aspect ratio television display, however in the prior art methods the processed image was noticeably distorted from the original image.

Teraoka et al, discloses a system which uses non-linear compression and expansion in order to display a received 4:3 and 16:9 on a 16:9 and 4:3 screen respectively, and to eliminate the "burnt screen". Teraoka also discloses stretching/compressing the image non-linearly to maintain the center portion of the original signal.

The use of sensors on a display to control the displayed picture is well-known in the art. As disclosed by applicant's Fig 1, 2 which includes sensors 108/208, 110/210, 112/212 and 114/214 to ascertain the position of the displayed image and assist in the adjustment of the displayed picture.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Marflak, which discloses the conversion of a received first aspect ratio video signal, into a 2nd displayed aspect ratio and preventing screen burnout from the display of signals with different aspect ratios, with applicant's admitted prior art and Teraoka, in order to determine the position of the adjusted 2nd aspect ratio video signal, by using conventional display sensors in order to maintain the center position, both horizontally and vertically, of the original 1st aspect ratio receive signal, to therefore provide a received signal onto a display where the aspect ratios may differ, and to prevent a burnt screen.

b) The examiner disagrees. As stated above in examiner's response, the applicant discloses "The movement of the image can be in the form of shifting the

entire image towards the sensor, or alternatively, stretching the image so that the edges of the image can be detected by the sensors." As the examiner stated above in the rejection and in the response, the combination of Marflak, Teraoka and applicant's admitted prior art perform the alternative of stretching the image so that the edges of the image can be detected by the sensors. Therefore, would it have been obvious for a combined prior art system to move an image by shifting the image towards the sensor, where the system performs stretching the image (increase/decrease) so the edges of the image can be detected by sensors, the examiner maintains it would have been an obvious embodiment. As stated above, sensors are conventional in the art, where sensors are used to center a received signal onto a display. In the event a signal is displayed where the image is shifted down (or up, left or right), in order to center the signal the signal must be moved (as a single entire image) up (or down, right or left respectively) in order to provide a centered display which maintains the original display aspect ratio.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-4700.

B.P.Y.

23 MARCH 2003

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600